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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,822	05/09/2006	Euan Christopher Smith	1365.106US1	5154
21186 7590 06/22/2009 SCHWEGMAN, LUNDBERG & WOESSNER, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402			EXAMINER FANG, PAKEE	
			ART UNIT 2629	PAPER NUMBER
			NOTIFICATION DATE 06/22/2009	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@slwip.com  
scape@slwip.com

### Office Action Summary

**Application No.**

10/578,822

**Applicant(s)**

SMITH ET AL.

**Examiner**

PAKEE FANG

**Art Unit**

2629

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 is/are allowed.
- 6) ☒ Claim(s) 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 November 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. The amendment filed on 03/27/2009 has been entered and considered by examiner. Claims 1-9 are presented for examination.

### *Priority*

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in the application filed on 05/09/2006.

### *Specification*

3. The last 3 lines for page 4 of the specification of the amendment is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01. Please delete the following links:  
["www.dcf.gov/DCCI/rdwg/nmf.pdf"](http://www.dcf.gov/DCCI/rdwg/nmf.pdf) and  
[www.cs.utexas.edu/users/liuwg/383CProject/CS\\_383C\\_Project.htm](http://www.cs.utexas.edu/users/liuwg/383CProject/CS_383C_Project.htm)

### *Drawings*

4. Figures 1b-2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated and the applicant discloses those Figures in the **Background** of the invention as amended. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Ogusu (20020033782) in view of Iketsu (6201520).

In regard to claim 9, Ogusu discloses (Fig. 12 -13) a method of controlled current driving of a passive matrix organic light emitting diode (OLED) display [0008 -0012], said display having a matrix of OLED pixels (the intersections of A1-Am and B1-Bn) addressed by row and column electrodes (A1-Am and B1-Bn), the method comprising simultaneously driving a plurality of said column electrodes (A1-Am ) with a plurality of controlled column currents (11-1m) (0014) and a plurality of said row electrodes (B1 – Bn) with a plurality of controlled row currents (The currents traveling on B1-Bn as shown on Fig. 12B), using switches (21 -2n) such that a sum (total) of said column currents (11-1m) is divided between said row electrodes (Fig. 12B shows a column current is

being divided between row electrodes) in a controllable variable ratio (since the column currents, 11-1m, divided between row electrodes are controllable, thus the ratio of the current varies depending on which column current is on/off as shown by Figs. 13 and 15).

Ogusu does not explicitly teach the switches being a controllable current mirror; However, Iketsu discloses the switches functions comprising transistors 31 and 32 connected between the gate (which is a current mirror) to regulate the controllable column currents (Col. 6 lines 14 - 46). Therefore, it would have been obvious for one of ordinary skill in the art at the time of invention was made to combine the switches use to control the column currents divided between the row electrode of Ogusu with the current mirror configuration for the switches of Iketsu to prevent crosstalk caused by a semi-excited state of the non selected pixels, a large delay is not caused in emission of the selected pixel, and large-capacity display can be coped with (Iketsu, Col. 2lines 55-67).

#### ***Allowable Subject Matter***

7. Claims 1 - 8 allowed.

#### ***Response to Arguments***

8. Applicant's arguments with respect to claim 9 has been considered but are moot in view of the new ground(s) of rejection.

In view of amendment, the reference Ogusu and Iketsu have been used for new ground of rejections.

#### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Smith (WO 03/079322) is cited to teach a display driver circuits.

Kim et al. (20050093786) is cited to teach a method for driving electro-luminescence display device.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Inquiries***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAKEE FANG whose telephone number is (571)270-7219. The examiner can normally be reached on Mon-Friday 9 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PAKEE FANG/  
Examiner, Art Unit 2629

/Chanh Nguyen/  
Supervisory Patent Examiner, Art  
Unit 2629